

Patent claims

1. A vacuum cleaner bag, comprising of:
an air-permeable filter material,
5 wherein the bag includes, per 1000 cm³ volume, between 1
and 30 g of the material which is whirled up under an air
flow, the material being whirled up having a volume per
mass unit between 5 cm³ /g to 100 cm³ /g.
- 10 2. The vacuum-cleaner bag according to claim 1, wherein the
material includes at least one of fibres and flakes.
3. The vacuum-cleaner bag according to claim 2, wherein the
15 fibres are at least one of chemical fibres and natural
fibres.
4. The vacuum-cleaner bag according to claim 3, wherein the
chemical fibres are cellulose fibres.
- 20 5. The vacuum-cleaner bag according to claim 3, wherein the
chemical fibres are at least one of viscose fibres and
synthetic fibres.
6. The vacuum-cleaner bag according to claim 4, wherein the
25 synthetic fibres are selected from fibres formed from at
least one of polyolefins, polyester, polyamides,
polyacrylonitrile and polyvinyl alcohol.

7. The vacuum-cleaner bag according to claim 3, wherein the natural fibres are selected from at least one of cellulose, wood fibre materials, kapok, flax, jute, Manila hemp, coco, wool, cotton, Kenaf, abaca, mulberry bast and fluff pulp.
8. The vacuum-cleaner bag according to claim 2, wherein the fibres at least one of (i) are at least one of charged and triboelectric fibre mixtures and (ii) form a triboelectric combination in combination with a filter medium of a dust-collecting filter.
9. The vacuum-cleaner bag according to claim 2, wherein the fibres at least one of (i) are at least one of smooth, branched, crimped, hollow and textured and (ii) have a non-circular cross-section.
10. The vacuum-cleaner bag according to claim 2, wherein the fibres have a trilobal cross-section.
11. The vacuum-cleaner bag according to claim 2, wherein the fibres have a mean length of between 0.3 mm and 100 mm.
12. The vacuum-cleaner bag according to claim 2, wherein the fibres have a mean length of between 0.5 and 20 mm.

13. The vacuum-cleaner bag according to claim 9, wherein the fibres have a mean length of 1 to 9.5 mm.

14. The vacuum-cleaner bag according to claim 2, wherein the flakes are selected from cellular plastics, non-wovens, textiles, foamed starch, foamed polyolefins, films and recovered fibres.

15. The vacuum-cleaner bag according to claim 14, wherein the flakes have a diameter between 0.3 mm and 30 mm.

16. The vacuum-cleaner bag according to claim 14, wherein the flakes have a diameter between 0.5 and 20 mm.

17. The vacuum-cleaner bag according to claim 14, wherein the flakes have a diameter between 1 and 9.5 mm.

18. The vacuum-cleaner bag according to claim 1, wherein the material is electrostatically charged.

19. The vacuum-cleaner bag according to claim 1, wherein the vacuum-cleaner bag is dimensioned and designed to have a volume flow rate through the bag between 10 m³/h and 400 m³/h.

20. The vacuum-cleaner bag according to claim 1, wherein between 5 and 15 g of the material are contained per 1000 cm³.
- 5 21. The vacuum-cleaner bag according to claim 1, wherein the material is at least one of (i) one of a single-layer paper and a multilayer paper and (ii) a non-woven material.
- 10 22. A method for extending a service life of a vacuum-cleaner bag which is operated with a predetermined volume flow rate, comprising:
utilizing the vacuum-cleaner bag according to claim 1.
- 15 23. The method according to claim 22, wherein a working volume flow rate is between 10 m³/h and 400 m³/h .
24. The method according to claim 22, comprising:
introducing the material into the vacuum-cleaner bag one
20 of (i) before a start of a first suction process and (ii) at the start of the suction process.
25. The method according to claim 22, wherein the material is present in a wrapper, and comprising:
25 introducing the material into the vacuum-cleaner bag one of (i) before a start of a first suction process and (ii) at the start of the suction process.

26. The method according to claim 25, wherein the wrapper is destroyable at a predetermined volume flow rate.

5 27. The method according to claim 22, wherein the vacuum cleaner is one of a cylinder vacuum-cleaner and an upright vacuum-cleaner.